

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : T. KLOS et al.

Group Art Unit: 2616

Appl No.: 09/853,722

Examiner: Toan Nguyen

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For: METHOD AND SYSTEM FOR PROVISIONING DIGITAL SUBSCRIBER
LINE FACILITIES

APPEAL BRIEF UNDER 37 C.F.R. §41.37

Commissioner for Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop Appeal Brief - Patents
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

This appeal is from the rejection of claims 1-38, as set forth in the Final Office Action of June 15, 2007. A Notice of Appeal was filed on September 17, 2007 in response to the Final Office Action of June 15, 2007, and the (two-month) period for filing an Appeal Brief, having been set to expire on November 19, 2007, has been extended by the Request for a (two-month) Extension of Time filed concurrently herewith to expire on January 17, 2008. The requisite fee for filing an Appeal Brief under 37 C.F.R. §41.20(b)(2) is submitted herewith.

However, if for any reason the necessary fee is not associated with this file or the attached fee is inadequate, the Commissioner is authorized to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No. 19-0089.

(1) **REAL PARTY IN INTEREST**

The real party in interest is AT&T Services, Inc., as established by a Change of Name recorded in the U.S. Patent and Trademark Office on November 27, 2007 at Reel 020155 and Frame 0947, and an Assignment recorded in the U.S. Patent and Trademark Office on August 22, 2001, at Reel 012095 and Frame 0049.

(2) **RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

(3) **STATUS OF THE CLAIMS**

Claims 1-38, all of the claims pending in this application, stand finally rejected and are the subject of this appeal. Appellants appeal the final rejection of claims 1-38. A copy of claims 1-38 is attached as an Appendix to this brief.

(4) **STATUS OF THE AMENDMENTS**

The Amendment that was filed on March 23, 2007 has been entered.

(5) **SUMMARY OF THE CLAIMED SUBJECT MATTER**

Initially, Appellants note that the following descriptions are made with respect to the independent claims and include references to particular parts of the specification. As such, the following are merely exemplary and are not a surrender of other aspects of the present invention

that are also enabled by the present specification as well as those that are directed to equivalent structures or methods.

Independent Claim 1

Independent claim 1 recites a method for provisioning a digital subscriber line (DSL) service for a subscriber in a telecommunications network, the method comprising: receiving a service order at a provisioning server, the service order requesting implementation of the DSL service and comprising provisioning data; identifying a plurality of facilities assigned to implement the service order based on the provisioning data, the plurality of facilities comprising at least a remote terminal connectable to a terminal of the DSL subscriber; determining an interface corresponding to each of the plurality of assigned facilities, each interface converting at least a portion of the provisioning data into a specific protocol corresponding to the assigned facility; and configuring each of the plurality of facilities, using the corresponding interface, to implement the service order based on the provisioning data.

In this regard, exemplary embodiments of the present specification are shown in FIGS. 1 to 5, and disclosed at paragraph page 14, line 21 to page 38, line 2. The exemplary embodiments disclose a digital subscriber line (DSL) service for a subscriber (100, FIG. 1) in a telecommunications network (150, FIG. 1). A service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) is received at a provisioning server (128, FIG. 1), the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) requesting implementation of the DSL service and comprising provisioning data (page 5, line 24 to page 6, line 8; page 6, lines 23-27; page 8, lines 12-15; page 13, lines 3-7; page 31, line 13 to page 32, line 9). A plurality of facilities (RT 102, RT controller

104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) are identified and assigned to implement the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) based on the provisioning data (page 5, line 24 to page 6, line 8; page 6, lines 23-27; page 8, lines 12-15; page 13, lines 3-7; page 31, line 13 to page 32, line 9). The plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) comprise at least a remote terminal (RT 102, FIG. 1) connectable to a terminal of the DSL subscriber (100, FIG. 1). An interface (page 26, line 14 to page 29, line 2) corresponding to each of the plurality of assigned facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and paragraph page 24, line 18 to page 25, line 12) is determined, and each interface (page 26, line 14 to page 29, line 2) converts at least a portion of the provisioning data (page 5, line 24 to page 6, line 8; page 6, lines 23-27; page 8, lines 12-15; page 13, lines 3-7; page 31, line 13 to page 32, line 9) into a specific protocol (page 26, line 14 to page 29, line 8)), corresponding to the assigned facility. Each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) are configured, using the corresponding interface (page 26, line 14 to page 29, line 2), to implement the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) based on the provisioning data (page 5, line 24 to page 6, line 8; page 6, lines 23-27; page 8, lines 12-15; page 13, lines 3-7; page 31, line 13 to page 32, line 9).

Independent Claim 8

Independent claim 8 recites a method for provisioning a digital subscriber line (DSL) service in a telecommunications network for a subscriber, the method comprising: receiving a

service order at a common server, requesting set up of the DSL service; converting the service order into provisionable steps; determining facility assignment data related to each of a plurality of facilities needed to implement the provisionable steps, the facility assignment data comprising identification of at least a remote terminal and a subscriber port, connectable to a terminal of the DSL subscriber, and an optical concentrator device connectable to the remote terminal; determining an interface for each of the plurality of facilities, each interface enabling communication with the corresponding one of the plurality of facilities; and configuring each of the plurality of facilities to implement the service order based on instructions communicated from the common server to each of the plurality of facilities using the corresponding interface.

In this regard, exemplary embodiments of the present specification are shown in FIGS. 1 to 5, and disclosed at page 14, line 21 to page 38, line 2. The exemplary embodiments disclose a method for provisioning a digital subscriber line (DSL) service in a telecommunications network (150, FIG. 1) for a subscriber (100, FIG. 1). A service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) is received at a common server (128, FIG. 1), requesting set up of the DSL service and for converting the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) into provisionable steps. Facility assignment data related to each of a plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) needed to implement the provisionable steps is determined. The facility assignment data comprises identification of at least a remote terminal (RT 102, FIG. 1) and a subscriber port (101, FIG. 1, paragraphs page 9, lines 15-24; page 10, lines 17-25; page 11, lines 11-26; and page 12, line 16 to page 13, line 2), connectable to a terminal of the DSL subscriber (100, FIG. 1). An optical concentrator (OCD 104, FIG. 1) device is connectable to the remote terminal (RT 102,

FIG. 1). An interface (page 26, line 14 to page 29, line 2) is determined for each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12). Each interface (page 26, line 14 to page 29, line 2) enables communication with the corresponding one of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12). Each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) to implement the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) based on instructions communicated from the common server (128, FIG. 1) to each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) using the corresponding interface (page 26, line 14 to page 29, line 2).

Independent Claim 18

Independent claim 18 recites a system for provisioning a digital subscriber line (DSL) service in a telecommunications network, the system comprising: a provisioning server configured to receive a service order for implementing the DSL service; a plurality of network facilities connectable to the server; and a system database configured to store the service order and a plurality of interface identifiers for interfaces corresponding to the plurality of network facilities; wherein the provisioning server is further configured to determine provisioning facilities, from among the plurality of network facilities, assigned to implement the service order, the provisioning facilities comprising at least one remote terminal, connectable to a terminal of a subscriber of the DSL service; and wherein the provisioning server is further configured to direct configuration of each of the provisioning facilities, using at least one of the interface identifiers

retrieved from the system database corresponding to each of the provisioning facilities, enabling communication with the provisioning facilities, to implement the DSL service based on the service order.

In this regard, exemplary embodiments of the present specification are shown in FIGS. 1 to 5, and disclosed at page 14, line 21 to page 38, line 2. The exemplary embodiments disclose a system for provisioning a digital subscriber line (DSL) service in a telecommunications network (150, FIG. 1). The system comprises a provisioning server (128, FIG. 1) configured to receive a service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) for implementing the DSL service. A plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) are connectable to the server (128, FIG. 1), and a system database (130, FIG. 1) is configured to store the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) and a plurality of interface identifiers for interfaces (page 26, line 14 to page 29, line 2) corresponding to the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12). The provisioning server (128, FIG. 1) is further configured to determine provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and paragraph page 24, line 18 to page 25, line 12), from among the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), assigned to implement the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)). The provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) comprise at least one remote terminal (RT 102, FIG. 1), connectable to a terminal of a subscriber (100, FIG. 1) of the DSL service. The provisioning server (128, FIG. 1) is further configured to direct configuration

of each of the provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), using at least one of the interface identifiers retrieved from the system database (130, FIG. 1) corresponding to each of the provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), enabling communication with the provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), to implement the DSL service based on the service order (S210, FIG. 2, paragraph (page 19, line 9 to page 20, line 9)).

Independent Claim 24

Independent claim 24 recites a system for provisioning a digital subscriber line (DSL) service in a telecommunications network, the system comprising: a service order entry system configured to receive a service order for the DSL service from a DSL service provider; a server configured to receive the service order from the service order entry system; a plurality of network facilities connectable to the server and a terminal of a subscriber of the DSL service; a facility inventory system connected to the server and configured to store facility information regarding each of the plurality of network facilities, the facility information comprising a type, a location and an availability of each of the plurality of network facilities; and a system database connected to the server and configured to store data relating to the service order and a plurality of interfaces corresponding to the plurality of network facilities, the plurality of interfaces enabling communication with the plurality of network facilities; wherein the server is further configured to communicate with the facility inventory system to determine provisioning facilities from among the plurality of network facilities needed to implement the DSL service based on the service

order, the provisioning facilities comprising at least one remote terminal having a subscriber port and at least one optical concentrator device, the remote terminal being connectable to the optical concentrator device via an optical fiber line; and wherein the server is further configured to implement configuration of each of the provisioning facilities using a corresponding one of the plurality of interfaces retrieved from the system database to implement the DSL service.

In this regard, exemplary embodiments of the present specification are shown in FIGS. 1 to 5, and disclosed at page 14, line 21 to page 38, line 2. The exemplary embodiments disclose a system for provisioning a digital subscriber line (DSL) service in a telecommunications network (150, FIG. 1), the system comprising: a service order entry system (112, FIG. 1) configured to receive a service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) for the DSL service from a DSL service provider; a server (128, FIG. 1) configured to receive the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) from the service order entry system (112, FIG. 1); a plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) connectable to the server (128, FIG. 1) and a terminal of a subscriber (100, FIG. 1) of the DSL service; a facility inventory system (114, FIG. 1) connected to the server (128, FIG. 1) and configured to store facility information regarding each of the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), the facility information comprising a type, a location and an availability of each of the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12); and a system database (130, FIG. 1) connected to the server (128, FIG. 1) and configured to store data relating to the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) and a plurality of interfaces (page 26, line 14 to

page 29, line 2) corresponding to the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), the plurality of interfaces (page 26, line 14 to page 29, line 2) enabling communication with the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12); wherein the server (128, FIG. 1) is further configured to communicate with the facility inventory system (114, FIG. 1) to determine provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) from among the plurality of network facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) needed to implement the DSL service based on the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)), the provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) comprising at least one remote terminal (RT 102, FIG. 1) having a subscriber port (101, FIG. 1, 9, lines 15-24; page 10, lines 17-25; page 11, lines 11-26; and page 12, line 16 to page 13, line 2) and at least one optical concentrator device (OCD 104, FIG. 1), the remote terminal (RT 102, FIG. 1) being connectable to the optical concentrator device (OCD 104, FIG. 1) via an optical fiber line (OC3, FIG. 1); and wherein the server (128, FIG. 1) is further configured to implement configuration of each of the provisioning facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) using a corresponding one of the plurality of interfaces (page 26, line 14 to page 29, line 2) retrieved from the system database (130, FIG. 1) to implement the DSL service.

Independent Claim 31

Independent claim 31 recites a computer readable medium for storing a computer program executed by a provisioning server that provisions a digital subscriber line (DSL) service in a telecommunications network, the computer readable medium comprising: a receiving code segment for receiving a service order requesting implementation of the DSL service; a facility assignment code segment for determining a plurality of facilities assigned to implement the service order based on provisioning data indicated by the service order, the plurality of facilities comprising at least a remote terminal connectable to a terminal of a DSL subscriber and an optical concentrator device connectable to the remote terminal; a determining code segment for determining an interface corresponding to each of the plurality of facilities, each interface converting the service order data into a specific protocol corresponding to the assigned facility; and a configuring code segment for configuring each of the plurality of facilities, using the corresponding interface, to implement the DSL service based on the service order.

In this regard, exemplary embodiments of the present specification are shown in FIGS. 1 to 5, and disclosed at page 14, line 21 to page 38, line 2. The exemplary embodiments disclose a computer readable medium for storing a computer program executed by a provisioning server (128, FIG. 1) that provisions a digital subscriber line (DSL) service in a telecommunications network (150, FIG. 1). The computer readable medium comprises a receiving code segment for receiving a service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) requesting implementation of the DSL service, and a facility assignment code segment for determining a plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line

18 to page 25, line 12) assigned to implement the service order (S210, FIG. 2, (paragraph (page 19, line 9 to page 20, line 9)) based on provisioning data (page 5, line 24 to page 6, line 8; page 6, lines 23-27; page 8, lines 12-15; page 13, lines 3-7; page 31, line 13 to page 32, line 9) indicated by the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)). The plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) comprise at least a remote terminal (RT 102, FIG. 1) connectable to a terminal of a DSL subscriber (100, FIG. 1) and an optical concentrator device (OCD 104, FIG. 1) connectable to the remote terminal (RT 102, FIG. 1). A determining code segment determines an interface (page 26, line 14 to page 29, line 2) corresponding to each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), and each interface (page 26, line 14 to page 29, line 2) converts the service order data (S210, FIG. 2, (page 19, line 9 to page 20, line 9) into a specific protocol (page 26, line 14 to page 29, line 8) corresponding to the assigned facility. A configuring code segment configures each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), using the corresponding interface (page 26, line 14 to page 29, line 2), to implement the DSL service based on the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)).

Independent Claim 38

Independent claim 38 recites a computer readable medium for storing a computer program that provisions a digital subscriber line (DSL) service in a telecommunications network, the computer readable medium comprising: a receiving code segment for receiving a service

order at a common server via a service order entry system, the service order requesting that the DSL service be set up for a DSL subscriber; a converting code segment for converting the service order into provisionable steps; a facility assignment code segment for determining facility assignment data related to each of a plurality of facilities needed to implement the provisionable steps, the facility assignment data comprising identification of at least a remote terminal and a subscriber port, connectable to a terminal of the DSL subscriber, and an optical concentrator device connectable to the remote terminal; an interface determining code segment for determining an interface for each of the plurality of facilities, each interface enabling communication with the corresponding one of the plurality of facilities; and a configuring code segment for configuring each of the plurality of facilities to implement the service order based on instructions communicated from the common server to each of the plurality of facilities using the corresponding interface.

In this regard, exemplary embodiments of the present specification are shown in FIGS. 1 to 5, and disclosed at page 14, line 21 to page 38, line 2. The exemplary embodiments disclose a computer readable medium for storing a computer program that provisions a digital subscriber line (DSL) service in a telecommunications network (150, FIG. 1). The computer readable medium comprises a receiving code segment for receiving a service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) at a common server via a service order entry system (112, FIG. 1). The service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) requests that the DSL service be set up for a DSL subscriber (100, FIG. 1). A converting code segment converts the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9)) into provisionable steps. A facility assignment code segment determines facility assignment data related to each of a plurality of

facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) needed to implement the provisionable steps. The facility assignment data comprises identification of at least a remote terminal (RT 102, FIG. 1) and a subscriber port (101, FIG. 1, 9, lines 15-24; page 10, lines 17-25; page 11, lines 11-26; and page 12, line 16 to page 13, line 2), connectable to a terminal of the DSL subscriber (100, FIG. 1). An optical concentrator device (OCD 104, FIG. 1) is connectable to the remote terminal (RT 102, FIG. 1). An interface (page 26, line 14 to page 29, line 2) determining code segment determines an interface (page 26, line 14 to page 29, line 2) for each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12). Each interface (page 26, line 14 to page 29, line 2) enables communication with the corresponding one of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12). A configuring code segment for configures each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12) to implement the service order (S210, FIG. 2, (page 19, line 9 to page 20, line 9) based on instructions communicated from the common server (128, FIG. 1) to each of the plurality of facilities (RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12)) using the corresponding interface (page 26, line 14 to page 29, line 2).

(6) GROUND S OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-38 are pending in the application. In the Official Action dated June 15, 2007, the Examiner rejected claims 1-7, 18-19 and 22-23 under 35 U.S.C. § 103(a) as being unpatentable over SUNDARESAN et al. (U.S. Patent No. 6,463,079) in view of GIDWANI

(U.S. Patent No. 6,640,239). The Examiner rejected claims 8-17, 20-21 and 24-38 under 35 U.S.C. § 103(a) as unpatentable over SUNDARESAN et al. in view of GIDWANI further in view of BYERS (U.S. Patent No. 5,926,472). Appellants respectfully traverse these rejections, at least for the reasons stated below.

(7) APPELLANTS' ARGUMENTS

A. THE REJECTION OF CLAIMS 1-7, 18, 19 22 AND 23 UNDER 35 U.S.C. § 103 OVER SUNDARESAN ET AL. IN VIEW OF GIDWANI IS IN ERROR

1. SUNDARESAN et al.

The primary reference used to finally reject the claims is the SUNDARESAN et al. patent, which is directed to pre-qualifying service requests in order to establish services in a network before the services are provisioned. *See, e.g.*, The Abstract and FIG. 9, which is reproduced below:

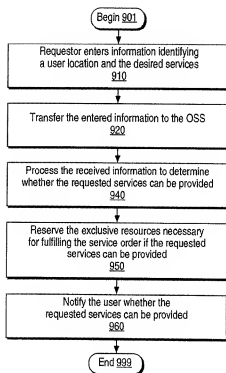


FIG. 9

In other words, SUNDARESAN et al. determine information such as the identity and location of a subscriber in step 910, whether a requested service is available at that location, whether the length of the subscriber's local loop exceeds that required for providing the service, and the like. *See, e.g.*, col. 16, lines 50-67. The information determined by SUNDARESAN et al. is simply used to pre-qualify or notify the user in step 960, instead of actually provisioning DSL services as claimed by Appellants.

In contrast, the appealed claims 1-7, 18, 19 22 and 23 are directed to actually provisioning DSL services, *e.g.*, by determining assigned facilities (see, for example, RT 102, RT controller 104, OCD 104, EMS 116, FIG. 1 and page 24, line 18 to page 25, line 12), converting service orders into provisionable steps and/or actually configuring the facilities to implement the

requested service. The appealed claims are directed to service orders which have already been pre-qualified, *e.g.*, by a system such as that disclosed by SUNDARESAN et al. Therefore, the teachings of SUNDARESAN et al. are not applicable to the actual provisioning, because the claimed actual provisioning occurs after the notification step 960 of SUNDARESAN et al.

In this context, it is apparent that the portions of SUNDARESAN et al. on which the Examiner relied for teaching various features of the independent claims are not relevant. For example, with respect to independent claims 1, 18 and 31, a service order, which requests implementation of a DSL service, is received at a provisioning server for actually implementing the service. The facilities assigned to implement the service order are identified based on the service order or based on provisioning data contained in the service order. SUNDARESAN et al. do not include a provisioning server, since they do not teach actual provisioning, but rather teach pre-qualifying service orders that are later provisioned.

With respect to independent claims 8 and 38, the Examiner relied on col. 16, lines 27-67, and col. 18, lines 1-24, of SUNDARESAN et al. to teach converting a service order into provisionable steps. However, these portions of the patent merely describe a subscriber submitting information to an operational support system (OSS) 190 for pre-qualifying a service order, which includes, for example, determining whether the requested service is provided in a geographic area and local loop distances. Col. 16, lines 50-67; col. 18, lines 6-12. There is no teaching or suggestion of going further and provisioning the services, and certainly no teaching or suggestion of how to actually provision the services, *i.e.*, by converting the service order into provisionable steps, as recited in claims 8 and 38.

With respect to independent claim 24, the Examiner relied on SUNDARESAN et al. to teach a facility inventory system, which stores facility information including a type, location and availability of network facilities, specifically identifying the server system 1030 of Fig. 10. However, the server system 1030 of SUNDARESAN et al. stores information relating to a DSL subscriber (e.g., the user location, the desired services and the date from which the services are desired – all information related to pre-qualification), not information relating to the facilities needed to actually implement the services. See, e.g., col. 18, lines 1-12. In fact, SUNDARESAN et al. disclose that the server system 1030 may not even be needed to implement order entry under certain circumstances, in which user information is obtained through alternative means. See col. 18, lines 45-53. Therefore, the server system 1030 clearly does not teach the facility inventory system with which the server of claim 24 communicates to determine the provisioning facilities from the plurality of network facilities needed to implement the DSL service based on the service order.

2. GIDWANI

In the above-referenced Official Action, the Examiner relied on the GIDWANI patent, only to teach determining an interface corresponding to each of the plurality of facilities, each interface converting at least a portion of the provisioning data into a specific protocol corresponding to the assigned facility, and configuring each of the facilities using the corresponding interface. Therefore, GIDWANI does not overcome the deficiencies of the primary reference.

Further, GIDWANI discloses a Unified Internet Protocol (UIP) Server 226, which delivers multimedia content in combination with UIP clients. *See, e.g.*, col. 23, lines 17-21 and FIG. 2 which is reproduced below:

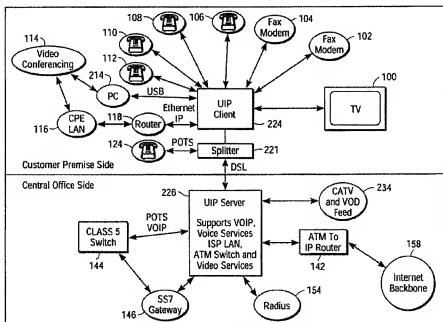


FIG. 2

The UIP Server 226 has the capability of interfacing, for example, with SS7 Gateway 146, Cable TV and Video on Demand Feed 234 and ATM to IP Router 142, as well as supporting voice over IP. *See, e.g.*, col. 23, lines 38-65. However, unlike the subject matter of the pending claims, GIDWANI discloses interfacing with these multimedia services that apparently have already been provisioned. In other words, GIDWANI does not teach or suggest determining an interface corresponding to each assigned facility for the purpose of provisioning a DSL server. In

GIDSWANI, the UIP Server 226 is merely interfacing with the multimedia networks after provisioning has already occurred .

3. The Hypothetical Combination Is Not The Claimed Invention

Even if the hypothetical combination of SUNDARESAN et al. and GIDWANI is made, the resulting combination would not be Appellants' claimed invention, because the provisioning in the hypothetical system would still have to be performed in the usual and conventional way without the benefit of Appellants' claimed invention. In other words, if the skilled artisan was to follow the teachings of SUNDARESAN et al. and GIDWANI , the resulting combination would not be the Applicants' claimed invention of independent claims 1, 8, 18, 24, 31 and 38. Since SUNDARESAN et al. is directed to a pre-qualifying system, and GIDWANI is directed to a post-provisioning system, the resulting combination would be a system in which the pre-qualifying steps would be performed by SUNDARESAN et al., the provisioning steps would be performed in the conventional way, and the post-provisioning steps would be performed by the system of GIDWANI . The resulting hypothetical combination of SUNDARESAN et al. and GIDWANI, therefore, is not the Applicants' claimed invention of independent claims 1, 8, 18, 24, 31 and 38. Accordingly, withdrawal of the rejections based on the combination of these references is respectfully requested.

B. THE REJECTION OF CLAIMS 8-17, 20-21 AND 24-38 UNDER 35 U.S.C. § 103 OVER SUNDARESAN ET AL. IN VIEW OF GIDWANI AND FURTHER IN VIEW OF BYERS

With respect to independent claims 8, 24 and 38, the Examiner additionally relied on BYERS, in combination with SUNDARESAN et al. and GIDWANI, only to teach configuring an optical concentrator device. Therefore, even assuming (without admitting) the propriety of combining these references, BYERS does not overcome the deficiencies of SUNDARESAN et al. and GIDWANI, discussed above. Accordingly, withdrawal of the rejections based on the combination of these references is respectfully requested.

C. THE REJECTION OF THE DEPENDENT CLAIMS UNDER 35 U.S.C. § 103 IS IN ERROR

1. Dependent Claims 2-4, 19-21 and 32-34

Dependent claims 2-4, 19-21 and 32-34 recite at least one path interconnecting the plurality of facilities and a subscriber port of the remote terminal in a provisioning method or system. Appellants respectfully submit that none of the cited references disclose the claimed determining or enabling of the path interconnecting the plurality of facilities and the subscriber port of the remote terminal.

2. Dependent Claims 5 and 35

Dependent claims 5 and 35 recite provisioning data that is derived based at least in part on the provisioning data indication in the service order in a provisioning method or system.

Appellants respectfully submit that none of the cited references disclose the claimed provisioning data that is derived based at least on part on the provisioning data indication in the service order.

3. Dependent Claims 7, 11, 22, 23, 25, 26, 30 and 37

With respect to dependent claims 7, 11, 22, 23, 25, 26, 30 and 37, SUNDARESAN et al. likewise do not teach or suggest displaying errors or erroneous data at a GUI, or correcting errors through input from the GUI. The portions of SUNDARESAN et al. relied upon by the Examiner (*i.e.*, Figs. 15 and 16; col. 23, lines 1-9; col. 23, line 26 – col. 24, line 55) merely disclose identifying an appropriate central office to associate with a particular user location, and the possibility of errors caused by relying on the user's phone number to make such a determination. There is no disclosure or suggestion of displaying an error message on a GUI, or receiving input via the GUI in response to the erroneous data.

4. Dependent Claim 9

Dependent claim 9 recites formatting data from the service order into a common internal format prior to converting the service order into provisional steps in a provisioning method or system. Appellants respectfully submit that none of the cited references disclose the claimed formatting data from the service order into a common internal format prior to converting the service order into provisional steps.

5. Dependent Claim 10

Dependent claim 10 recites validating an intent of the service order with respect to a state of a port of the remote terminal associated with the DSL subscriber and provisioning the service order in the remote terminal upon successful validation in a provisioning method or system. Appellants respectfully submit that none of the cited references disclose the claimed validating an intent of the service order with respect to a state of a port of the remote terminal associated with the DSL subscriber and provisioning the service order in the remote terminal upon successful validation.

6. Dependent Claims 12-14 and 27-29

Dependent claims 12-14 and 27-29 recite at least building, deleting or changing at least one virtual path over the optical fiber connection between the remote terminal and the optical concentrator device in a provisioning method or system. Appellants respectfully submit that none of the cited references disclose the claimed building, deleting or changing at least one virtual path over the optical fiber connection between the remote terminal and the optical concentrator device.

7. Dependent Claim 15

Dependent claim 15 recites configuring each of the plurality of facilities to implement the service order comprising one of building, deleting or changing at least one cross-connection in at least one of the plurality of facilities in a provisioning method or system. Appellants respectfully

submit that none of the cited references disclose the claimed configuring each of the plurality of facilities to implement the service order comprising one of building, deleting or changing at least one cross-connection in at least one of the plurality of facilities.

8. Dependent Claim 16

Dependent claim 16 recites enqueuing the provisionable steps after determining the facility assignment data related to each of a the plurality of facilities needed to implement the provisionable steps, and sequentially dequeuing the provisionable steps for implementation on a scheduled provisioning date, prior to determining the interface for each of the plurality of facilities in a provisioning method or system. Appellants respectfully submit that none of the cited references disclose the claimed recites enqueuing the provisionable steps after determining the facility assignment data related to each of a the plurality of facilities needed to implement the provisionable steps, and sequentially dequeuing the provisionable steps for implementation on a scheduled provisioning date, prior to determining the interface for each of the plurality of facilities.

9. Dependent Claims 6, 17, 30 and 36

For example, dependent claims 6, 17, 30 and 36 recite, in part, service profile data and/or a profile identification that relate to a service of a service provider and service parameter(s). The service profile is identified for provisioning purposes, and may include information such as discrete multi-tone (DMT) parameters, *e.g.*, data rates, noise levels and power characteristics to streamline provisioning of a service order. *See* Specification, paras. [0038], [0041]. In

comparison, Fig. 9; col. 15, lines 55-65; col. 19, lines 14-51 and col. 20, lines 26-35 of SUNDARESAN et al., relied upon by the Examiner (with respect to claims 17 and 36), teach entering data specific to a user, such as user location, as opposed to referencing an identifiable profile relating to the service and service parameters.

Accordingly, reversal of the rejections of the various dependent claims, based on these additional reasons, is respectfully requested.

(8). CONCLUSION

The required Appeal Brief Fee in the amount of \$500 is attached hereto.

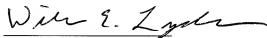
In view of the herein contained arguments, Applicants respectfully request that the decision of the Examiner to reject claims 1-38 set forth in the Official Action of March 23, 2007, be reversed together with an indication of the allowability of all pending claims. Such action is respectfully requested and is believed to be appropriate and proper.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

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If there are any questions concerning this Brief or the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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APPENDIX A: – CLAIMS APPEALED

CLAIMS APPEALED

1. A method for provisioning a digital subscriber line (DSL) service for a subscriber in a telecommunications network, the method comprising:

receiving a service order at a provisioning server, the service order requesting implementation of the DSL service and comprising provisioning data;

identifying a plurality of facilities assigned to implement the service order based on the provisioning data, the plurality of facilities comprising at least a remote terminal connectable to a terminal of the DSL subscriber;

determining an interface corresponding to each of the plurality of assigned facilities, each interface converting at least a portion of the provisioning data into a specific protocol corresponding to the assigned facility; and

configuring each of the plurality of facilities, using the corresponding interface, to implement the service order based on the provisioning data.

2. The method for provisioning a DSL service according to claim 1, further comprising:

determining at least one path interconnecting the plurality of facilities and a subscriber port of the remote terminal, the subscriber port being configured to connect with the DSL subscriber terminal.

3. The method for provisioning a DSL service according to claim 2, further comprising:

determining and implementing a cross-connection in at least one of the plurality of facilities to enable the at least one path interconnecting the plurality of facilities and the subscriber port.

4. The method for provisioning a DSL service according to claim 3, further comprising:

storing configuration data in a system database, the configuration data comprising data identifying the plurality of facilities assigned to implement the service order, the at least one path interconnecting the plurality of facilities and the subscriber port of the remote terminal, and the cross-connection in the at least one of the plurality of facilities.

5. The method for provisioning a DSL service according to claim 1, wherein the provisioning data is derived based on the provisioning data indication in the service order.

6. The method for provisioning a DSL service according to claim 1, wherein the service order indicates the provisioning data by at least one of providing the provisioning data and providing a profile identification that corresponds to parameters that define the DSL service.

7. The method for provisioning a DSL service according to claim 1, further comprising:

determining whether the service order comprises erroneous data; and

when the service order is determined to comprise erroneous data, displaying at a graphical user interface an error message, which identifies the erroneous data, and receiving input from the graphical user interface to correct the erroneous data.

8. A method for provisioning a digital subscriber line (DSL) service in a telecommunications network for a subscriber, the method comprising:

receiving a service order at a common server, requesting set up of the DSL service;

converting the service order into provisionable steps;

determining facility assignment data related to each of a plurality of facilities needed to implement the provisionable steps, the facility assignment data comprising identification of at least a remote terminal and a subscriber port, connectable to a terminal of the DSL subscriber, and an optical concentrator device connectable to the remote terminal;

determining an interface for each of the plurality of facilities, each interface enabling communication with the corresponding one of the plurality of facilities; and

configuring each of the plurality of facilities to implement the service order based on instructions communicated from the common server to each of the plurality of facilities using the corresponding interface.

9. The method for provisioning a DSL service according to claim 8, further comprising:

formatting data from the service order into a common internal format prior to converting the service order into provisional steps.

10. The method for provisioning a DSL service according to claim 8, further comprising:

validating an intent of the service order with respect to a state of a port of the remote terminal associated with the DSL subscriber and provisioning the service order in the remote terminal upon successful validation.

11. The method for provisioning a DSL service according to claim 8, further comprising:
identifying errors related to at least one of the service order and the provisioning of the DSL service; and

displaying information regarding the errors at a graphical user interface, the graphical user interface being configured to enable a user to analyze and respond to the errors.

12. The method for provisioning a DSL service according to claim 8, the configuring each of the plurality of facilities to implement the service order comprising one of building, deleting or changing at least one virtual path over an optical fiber connection between the remote terminal and the optical concentrator device.

13. The method for provisioning a DSL service according to claim 12, the building of at least one virtual path over an optical fiber connection between the remote terminal and the optical concentrator device comprising:

providing a network-side port at the remote terminal configured to connect with the subscriber port;

communicating to the optical concentrator device the identity of the network-side port;
and

configuring the optical concentrator device to support the virtual path to the network-side port of the remote terminal.

14. The method for provisioning a DSL service according to claim 12, the deleting of at least one virtual path over an optical fiber connection between the remote terminal and the optical concentrator device comprising:

disconnecting a network-side port at the remote terminal from the subscriber port;
communicating to the optical concentrator device the identity of the network-side port;
and

configuring the optical concentrator device to delete support of the virtual path to the network-side port of the remote terminal.

15. The method for provisioning a DSL service according to claim 8, the configuring each of the plurality of facilities to implement the service order comprising one of building, deleting or changing at least one cross-connection in at least one of the plurality of facilities.

16. The method for provisioning a DSL service according to claim 8, further comprising:
enqueueing the provisionable steps after determining the facility assignment data related to each of a the plurality of facilities needed to implement the provisionable steps; and

sequentially dequeuing the provisionable steps for implementation on a scheduled provisioning date, prior to determining the interface for each of the plurality of facilities.

17. The method for provisioning a DSL service according to claim 8, further comprising:

- receiving service profile data related to at least one service from a service provider, the service profile data comprising at least one parameter related to the service order;
- storing the service profile data in a system database; and
- configuring each of the plurality of facilities to implement the service order additionally based on the service profile data.

18. A system for provisioning a digital subscriber line (DSL) service in a telecommunications network, the system comprising:

- a provisioning server configured to receive a service order for implementing the DSL service;

- a plurality of network facilities connectable to the server; and

- a system database configured to store the service order and a plurality of interface identifiers for interfaces corresponding to the plurality of network facilities;

- wherein the provisioning server is further configured to determine provisioning facilities, from among the plurality of network facilities, assigned to implement the service order, the provisioning facilities comprising at least one remote terminal, connectable to a terminal of a subscriber of the DSL service; and

- wherein the provisioning server is further configured to direct configuration of each of the provisioning facilities, using at least one of the interface identifiers retrieved from the system database corresponding to each of the provisioning facilities, enabling communication with the provisioning facilities, to implement the DSL service based on the service order.

19. The system for provisioning a DSL service according to claim 18, the remote terminal comprising a subscriber port, the subscriber port being configured to connect with a DSL subscriber terminal, wherein the server enables at least one path interconnecting the plurality of facilities and the subscriber port of the remote terminal.

20. The system for provisioning a DSL service according to claim 19, wherein the at least one of the remote terminal and the optical concentrator device is configured to determine and implement a cross-connection to enable the at least one path interconnecting the plurality of facilities and the subscriber port.

21. The system for provisioning a DSL service according to claim 20, the system database comprising configuration data that identifies the plurality of facilities assigned to implement the service order, the at least one path interconnecting the plurality of facilities and the subscriber port of the remote terminal, and the cross-connection in the at least one of the plurality of facilities.

22. The system for provisioning a DSL service according to claim 18, further comprising:

a graphical user interface connected to the server and configured to interface with the server, the system database and at least one of the plurality of network elements.

23. The system for provisioning a DSL service according to claim 22, wherein, when the service order comprises erroneous data, the graphical user interface displays an error message, which identifies the erroneous data, and receives input from an operator in response to the erroneous data.

24. A system for provisioning a digital subscriber line (DSL) service in a telecommunications network, the system comprising:

- a service order entry system configured to receive a service order for the DSL service from a DSL service provider;

- a server configured to receive the service order from the service order entry system;

- a plurality of network facilities connectable to the server and a terminal of a subscriber of the DSL service;

- a facility inventory system connected to the server and configured to store facility information regarding each of the plurality of network facilities, the facility information comprising a type, a location and an availability of each of the plurality of network facilities; and

- a system database connected to the server and configured to store data relating to the service order and a plurality of interfaces corresponding to the plurality of network facilities, the plurality of interfaces enabling communication with the plurality of network facilities;

wherein the server is further configured to communicate with the facility inventory system to determine provisioning facilities from among the plurality of network facilities needed to implement the DSL service based on the service order, the provisioning facilities comprising at least one remote terminal having a subscriber port and at least one optical concentrator device,

the remote terminal being connectable to the optical concentrator device via an optical fiber line;
and

wherein the server is further configured to implement configuration of each of the provisioning facilities using a corresponding one of the plurality of interfaces retrieved from the system database to implement the DSL service.

25. The system for provisioning a DSL service according to claim 24, wherein the server is connectable to a graphical user interface to enable interaction by a network operator with at least one of the server, the plurality of network facilities and the system database.

26. The system for provisioning a DSL service according to claim 25, wherein the server is further configured to identify errors related to at least one of the service order and the provisioning of the DSL service; and

wherein information regarding the errors is displayed at the graphical user interface and error responses are sent from the graphical user interface to the server.

27. The system for provisioning a DSL service according to claim 24, wherein the configuration of each of the provisioning facilities, using a corresponding one of the plurality of interfaces retrieved from the system database to implement the service order, comprises one of building, deleting or changing at least one virtual path over the optical fiber connection between the remote terminal and the optical concentrator device.

28. The system for provisioning a DSL service according to claim 27, wherein the building of at least one virtual path over the optical fiber connection between the remote terminal and the optical concentrator device comprises:

providing a network-side port at the remote terminal configured to connect with the subscriber port;

communicating to the optical concentrator device the identity of the network-side port;
and

configuring the optical concentrator device to support the virtual path to the network-side port of the remote terminal.

29. The system for provisioning a DSL service according to claim 27, wherein the deleting of at least one virtual path over the optical fiber connection between the remote terminal and the optical concentrator device comprises:

disconnecting a network-side port at the remote terminal from the subscriber port;
communicating to the optical concentrator device the identity of the network-side port;
and

configuring the optical concentrator device to delete support of the virtual path to the network-side port of the remote terminal.

30. The system for provisioning a DSL service according to claim 24, further comprising an interface configured to connect a graphical user interface of the DSL service provider with the server;

wherein the system database is further configured to store service profile data related to at least one service of the DSL service provider, the service profile data comprising at least one parameter related to the service order; and

wherein provisioning facilities are configured to implement the service order additionally based on the service profile data.

31. A computer readable medium for storing a computer program executed by a provisioning server that provisions a digital subscriber line (DSL) service in a telecommunications network, the computer readable medium comprising:

a receiving code segment for receiving a service order requesting implementation of the DSL service;

a facility assignment code segment for determining a plurality of facilities assigned to implement the service order based on provisioning data indicated by the service order, the plurality of facilities comprising at least a remote terminal connectable to a terminal of a DSL subscriber and an optical concentrator device connectable to the remote terminal;

a determining code segment for determining an interface corresponding to each of the plurality of facilities, each interface converting the service order data into a specific protocol corresponding to the assigned facility; and

a configuring code segment for configuring each of the plurality of facilities, using the corresponding interface, to implement the DSL service based on the service order.

32. The computer readable medium for storing the computer program according to claim

31 further comprising:

a path determining code segment for determining at least one path interconnecting the plurality of facilities and a subscriber port of the remote terminal, the subscriber port being configured to connect with the DSL subscriber terminal.

33. The computer readable medium for storing the computer program according to claim 32 further comprising:

a cross-connection determining code segment for determining and implementing a cross-connection in at least one of the plurality of facilities to enable the at least one path interconnecting the plurality of facilities and the subscriber port.

34. The computer readable medium for storing the computer program according to claim 33 further comprising:

a storing code segment for storing configuration data in a system database, the configuration data comprising data identifying the plurality of facilities assigned to implement the service order, the at least one path interconnecting the plurality of facilities and the subscriber port of the remote terminal, and the cross-connection in the at least one of the plurality of facilities.

35. The computer readable medium for storing the computer program according to claim 31 wherein the provisioning data is derived based on the provisioning data indication in the

36. The computer readable medium for storing the computer program according to claim 31 wherein the service order indicates the provisioning data by at least one of providing the provisioning data and providing a profile identification that corresponds to parameters that define the DSL service.

37. The computer readable medium for storing the computer program according to claim 31 further comprising:

an error detection code segment for determining whether the service order comprises erroneous data and, when the service order is determined to comprise erroneous data, for displaying an error message at a graphical user interface, which identifies the erroneous data, and for receiving input from the graphical user interface to correct the erroneous data.

38. A computer readable medium for storing a computer program that provisions a digital subscriber line (DSL) service in a telecommunications network, the computer readable medium comprising:

a receiving code segment for receiving a service order at a common server via a service order entry system, the service order requesting that the DSL service be set up for a DSL subscriber;

a converting code segment for converting the service order into provisionable steps;

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a facility assignment code segment for determining facility assignment data related to each of a plurality of facilities needed to implement the provisionable steps, the facility assignment data comprising identification of at least a remote terminal and a subscriber port, connectable to a terminal of the DSL subscriber, and an optical concentrator device connectable to the remote terminal;

an interface determining code segment for determining an interface for each of the plurality of facilities, each interface enabling communication with the corresponding one of the plurality of facilities; and

a configuring code segment for configuring each of the plurality of facilities to implement the service order based on instructions communicated from the common server to each of the plurality of facilities using the corresponding interface.

APPENDIX B: EVIDENCE

(None)

APPENDIX C: RELATED PROCEEDINGS

(None)